

PURIFICATION AND USE OF HUMAN RECOMBINANT CARTILAGE
OLIGOMERIC MATRIX PROTEIN

ABSTRACT OF THE DISCLOSURE

5

The invention relates to purified cartilage oligomeric matrix protein (COMP), such as human COMP (hCOMP), including hCOMP prepared by purifying hCOMP in the presence of calcium (e.g. under calcium replete conditions); methods of purifying COMP in the presence of calcium; antibodies to purified hCOMP; ELISA kits comprising purified hCOMP; compositions (e.g. implants) comprising COMP; methods of repairing or producing cartilage comprising implanting a composition comprising COMP and a differentiation agent; methods for making an implant for cartilage repair comprising binding a differentiation agent to hCOMP; methods of transplanting chondrocytes and mesenchymal stem cells comprising culturing the cells in the presence of hCOMP; methods of transplanting chondrocytes comprising culturing them in the presence of hCOMP; methods of mediating attachment of cells using differentiation agent-bound COMP; methods of preparing a cartilage repair composition comprising culturing and purifying COMP in the presence of calcium and adding it to a matrix; and assays and methods of detection and quantification of COMP (e.g. degraded COMP and non-degraded COMP) and anti-COMP antibodies in a sample.